

AL robot

Universal labeller
for pallets



ALrobot is the definitive solution for any pallet labelling requirements

ALrobot

The system is offered as an integrated labeller, with all components housed in a compact base. This means that it can be easily installed simply by positioning the machine next to the pallet conveyor line.

The cabinet contains an ALcode unit for unwinding, printing and dispensing of A5 format labels (other formats available on request), and a four-axis robot arm which takes the labels from the printer by a suction pad and then moves towards the pallet, where it applies the labels in the pre-programmed positions.

The robot arm represents the heart of the system. It was designed entirely by ALtech to allow even the most distant pallet application positions to be reached (up to around 800 mm) and/or different application heights (approx. 1000 mm height difference). It is able to apply labels to three perpendicular faces of the pallet (front, back, side).

Application of the label is performed through contact, with the pallet stationary. The arm moves quickly to bring the applicator pad up to the application point, then it “searches” for the product with a slow, controlled movement, ensuring that the label is also applied correctly to pallets with slightly different positioning.

The robot arm has been specifically designed for this job, which has allowed for simplification of the mechanical configuration: the system is driven only by four stepper motors, which are simple and reliable, and thus does not require sophisticated (and expensive) gear units. It is entirely electric, including the vacuum pick-up of the label, with no compressed air supply required. It is extremely ergonomic: thanks to the ability to move the robot arm, the access point for the operator to change labels is particularly convenient.

As regards programming, ALrobot has been designed to be a universal labelling machine, that is one which can be easily programmed to perform different labelling tasks, on different lines or pallets, simply by teaching it what to do. The machine is, indeed, able to apply between one and sixteen labels to the same pallet. The position of each label can be defined by self-learning: in programming mode, it is therefore only necessary to move the arm with the arrow keys on the touchscreen display (the internal algorithm allows the arm to move on all three pallet axes while keeping the applicator pad parallel to the pallet at all times), and to store the position reached, associating it with a specific recipe or an external contact.

ALrobot can be equipped with the optional accessories already available for the ALcode range, i.e. laser scanner for confirming correct application; increased capacity reel holders; sensors to indicate when the reel is nearing its end.